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ABSTRACT

The major purpose of this study was to investigate selected personality characteristics of high and low rated, open and traditional classroom teachers who teach economically disadvantaged primary school children. A second purpose of the study was to investigate the assumptions which high and low rated, open and traditional teachers of the poor hold about open education. The Edwards Personal Preference Schedule, the Thurstone Temperament Schedule, and the Barth Scale were administered to 30 open and 30 traditional primary grade teachers, each rated by a supervisor as high or low in teaching ability. The high, open group contained 15 teachers; the low open section included 15; teachers in the high traditional subdivision numbered 15, while the low traditional category also included 15 teachers. The results demonstrated no significant personality differences between high and low rated open and traditional teachers. Open teachers, however, appear to emphasize intuitive judgment when assessing a child's work. In contrast, traditional teachers are more likely to rely on objective tests to determine what the child has learned. Whereas open teachers tend to believe that learning occurs through exploration, unthreatened by adults, traditional teachers are likely to feel that a child learns best when knowledge is transmitted by the teacher to the child. (Author/JM)

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Personality Characteristics And Assumptions Held By Open And Traditional Teachers of the Poor

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Abstract

This study: (1) determined if significant differences existed in personality characteristics and assumptions held about open education between open and traditional primary teachers; and (2) examined the content and construct validity of the Barth Scale using latent-partition analysis and factor analysis techniques.

The Edwards Personal Preference Schedule, the Thurstone Temperament Schedule and the Barth Scale were administered to 60 open and traditional teachers, rated high or low by a Supervisor. Multivariate analyses of variance were employed. No significant differences in personality characteristics were found; open versus traditional teachers ($p<.10$) and high rated, open versus low rated, open teachers ($p<.10$) differed significantly in assumptions.

Introduction

For many years, educators have recognized the importance of the teacher's personality in determining the quality of the learning environment. The teacher's personality attributes seemingly affect the manner in which materials are arranged and lessons are presented within the classroom; and no doubt are related to pupil motivation.

While personality traits have serious implications for the social-emotional growth of all children, they are especially crucial to the education of the poor. Often raised in crowded and frustrating environments, children of the poor are strongly influenced by the characteristics of the teacher, not only regarding social growth but in the development of outstanding academic abilities (Renzulli, 1971). Clearly, attempts to educate poor children should include careful consideration of the teacher's personality characteristics.

Purpose

The major purpose of this study was to investigate selected personality characteristics of high and low rated, open and traditional classroom teachers who teach economically poor, primary school children.

A second purpose of the study was to investigate the assumptions which high and low rated, open and traditional teachers of the poor hold about open education. The latter involved examining the content and construct validity of the Barth Scale (Barth, 1971) prior to its administration to high and low rated, open and traditional teachers.

Need for the Study

Following publication of the Plowden Report (1967), much has been written about open education. In the United States, Joseph Featherstone's (1967) articles in the New Republic have provided a guide for teachers who wanted to create open classrooms. Recently, Charles Silberman's book, Crisis in the Classroom (1970) has caused many educators to reassess the learning environments in their classrooms and in some cases adopt the open education approach.

> ... Schools of this sort exist in the United States on a small but rapidly growing scale; they can be found in the small cities and hamlets of North Dakota, in medium-sized cities such as Tuscon, Arizona and Portland, Oregon, in prosperous suburbs and in the ghettos of Philadelphia and New York (Silberman, p. 208).

What does open education offer to have caused such interest; and based on these offerings, why is a personality characteristics study needed?

Open education has been said to offer a genuine opportunity for individualized instruction. The extent to which the open teacher individualizes, however, is dependent upon his ability to create a classroom atmosphere which stimulates children to talk about their real concerns. Therefore, open teachers spend considerable time watching, listening, and talking with students, often lingering to write down a comment in an anecdotal record book kept for each child. Based on this information, the teacher prepares the classroom environment to entice learning according to each child's

needs, interests and abilities. The result is a classroom containing a variety of teacher-made, commercial and child-owned materials covering a wide range of interests and talents. An assortment of materials invites individualized learning, wherein each student can work at his own pace and in his own way.

Effective individualized instruction is largely determined by the teacher's ability to establish rapport and elicit important information from children about themselves. This rapport permeates the classroom environment, which Barth has referred to as "an extention of the teacher's personality (p. 82)." It appears, therefore, that the teacher's personal traits are related to the development of an open classroom containing a desirable social-emotional atmosphere.

Importance of the Study

Although an increasing number of school systems have recently adopted open education practices, the approach has been subjected to little systematic research, except for supportive statements by proponents. Therefore, the study was initially undertaken, in small part, to fulfill this urgent need for systematic examination. The investigation is important to the extent that it will provide some understanding concerning the personality characteristics and assumptions held by high and low rated, open and traditional primary, classroom teachers.

Further, the Barth Scale validity examination accomplishes a suggested need for instrumentation as described by Bussis and Chittenden (1970). There is a need for systematic appraisal in:

> ...describing how the teacher views her own role and how she regards children's learning. An interesting start in this direction has been made by Barth who constructed a Likert-type attitude scale for rating extent of agreement with 28 stated assumptions... (pp. 63-64).

The Barth Scale could prove useful to teachers examining their beliefs regarding assumptions underlying open education prior to implementing open classrooms. Such an examination could be important for the proper selection of teachers, since the success of open classrooms may well depend upon the choice of teachers whose beliefs are compatible with the ideas underlying open education.

Instruments Employed

The Edwards Personal Preference Schedule

Two instruments were employed in the study to measure the personality characteristics of high and low rated, open and traditional teachers. The Edwards Personal Preference Schedule (EPPS) is a 225 item, forced-choice, paired comparison test which measures 15 normal personality variables posed by H.A. Murray (1938). The EPPS (Edwards, 1959) through its forced-choice format, attempts to control social desireability and faking. However, ipsative scores are produced; in contrast to normative scores, ipsative scores express an individual's performance in relation to his overall average, rather than in relation to some norm or reference group (Thorndike and Hagen, 1969).

Nine of the 15 EPPS scales were analyzed in the study:

Achievement: To do one's best, to be successful, to accomplish demanding tasks, to be able to do things better than others.

Deference:	To yield to the leadership and judgment of others.
Order:	To organize one's work and personal life systematically.
Affiliation:	To form many strong friendships and share experiences.
Intraception:	To observe and analyze the behavior of one's self and of others.
Dominance:	To lead, to make decisions and to influence and persuade others.
Nurturance:	To show sympathy and generosity toward those who are less fortunate or who are in trouble.
Change:	To seek new experiences and new acquaintances.
Endurance:	To work at a task until it is completed.

The Thrustone Temperament Schedule

Because of the problem encountered with ipsative scores, a normative, factor based, personality instrument, the Thurstone Temperament Schedule (TTS) was selected for use in the investigation along with the EPPS. The 140 item TTS (Thurstone, 1953) measures seven personality variables derived from a factor analysis of scores in thirteen personality areas. Five scales were chosen for examination, consisting of the following temperaments:

Vigorous:	One who has great expenditures of energy.
Dominant:	A person who thinks of himself as a leader, public speaker and organizer and who takes charge.
Stable:	One who is cheerful and not easily irritated or annoyed.
Sociable:	One who enjoys the company of others and makes friends easily.

Reflective: A person who enjoys examining himself using meditative and reflective thinking.

The Barth Scale

The Barth Scale consists of 29 statements[1] which purports to measure the extent to which an individual agrees or disagrees with assumptions about open education. In his unpublished doctoral dissertation for the Harvard Graduate School of Education, Barth (1970) described each assumption and provided numerous supportive citations from the open education literature. Except for Barth's own "testing" of the assumptions which was "very informal and hardly rigorous,"[2] an examination of the Scale's content and construct validity, as undertaken in this study, is the first systematic attempt to identify its dimensions.

Method

The Edwards Personal Preference Schedule, the Thurstone Temperament Schedule and the Barth Scale were administered to 30 open and 30 traditional primary grade teachers, each rated by a supervisor as high or low in teaching ability. The high, open group contained 15 teachers; the low open section included 15; teachers in the high traditional subdivision numbered 15, while the low traditional category also embodied 15 teachers. Each teacher was paid $7.00 to complete the three instruments which took approximately one hour and 20 minutes of time.

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[1] Only 28 statements were used in the study. Two of the items were merged into one (see Table 1, factor item 18).

[2] Roland S. Barth, personal correspondence, May 10, 1972.

The investigation tested the following null hypotheses:

H_1 There is no significant difference between open and traditional teachers in selected personality characteristics.

H_2 There is no significant difference between high rated open teachers and high rated traditional teachers in selected personality characteristics.

H_3 There is no significant difference between open and traditional teachers in expressed assumptions regarding open education.

H_4 There is no significant difference between high rated open teachers and high rated traditional teachers in expressed assumptions regarding open education.

The main research design used in the study was a two factor, crossed design with multiple dependent variables. The design is graphically presented in Figure 1.

Insert Figure 1 about here

It was assumed by this design that the total variability among mean vectors has three potential sources: (1) treatment effects, (2) interactions and (3) random error.

Employing a multivariate analysis of variance, three multivariate statistical tests were possible: (1) a comparison of mean vectors for ratings (A_1 and A_2), (2) a comparison of mean vectors for classroom organization (B_1 and B_2) and (3) interaction of ratings with classroom organization. For the purpose of this study, an examination of mean vectors for classroom organization (Hypotheses one and three) was undertaken. Hypotheses two and four were stated on an a priori basis and tested with a one way multivariate analysis of variance. Differences in mean vectors

were analyzed to determine if the null hypotheses were rejected at the .10 level of confidence.

When the multivariate hypothesis of equality of mean vectors was rejected ($p<0.10$), the univariate F was examined for significance of specific measures at the .015 level (Bock, 1963). A judgment was made as to which of the individual variables differed significantly between the groups. The significance level (or error rate) for the individual F tests was calculated according to Kirk (1968):

$$1-1(-\alpha)^c = .10$$

c (number of comparisons) = 7

α (alpha) the individual significance level = .015

Individual scales, therefore, were rejected at the .015 leve. The above procedure was followed for each instrument.

Barth Scale Validity Study

As part of the study, the content and construct validity of the Barth Scale was examined using Latent Partition Analysis (LPA) (Wiley, 1967) and Factor Analysis. Table 1 contains the names of the seven factors identified, the original LPA item codes, factor item numbers, Barth Scale item stems and factor loadings.

Insert Table 1 about here

While the LPA study aided in labeling and giving meaning to the factors, the disparity between the LPA categories (as sorted by judges) and the factors (as determined by teacher response data), leads one to consider the possible disparity between theory

and practice in open education. For a detailed discussion of the Barth Scale validity study, refer to Coletta and Gable (1972).

Results

Null Hypothesis One

An inspection of Table 2 shows that the EPPS F-ratio (for multivariate tests of equality of mean vectors) failed to reject null hypothesis one.

Insert Table 2 about here

Similarly, an examination of the TTS F ratio (Table 3) indicates that the multivariate tests of equality of mean vectors was not significant at the .10 level.

Insert Table 3 about here

Null Hypothesis Two

The EPPS multivariate F-ratio was .753 (df 9, 20; $p<.659$) and failed to reject the second null hypothesis. The TTS F-ratio was .758 (df 5, 24; $p<.589$. Thus, the second null hypothesis for both the EPPS and the TTS was accepted.

Null Hypothesis Three

The Barth Scale data in Table 4 indicates that the F-ratio for the multivariate tests of equality of mean vectors for hypothesis 3 was significant at the .10 level of confidence.

Insert Table 4 about here

Thus, there was a significant difference between the means for open versus traditional teachers regarding assumptions about

open education. Specifically, an inspection of the univariate F, shown in Table 5, reveals that Scale 6 (Evaluating the Child's work) and Scale 7 (Learning Through Exploration) were individually significant at the .015 level.

Insert Table 5 about here

An inspection of the Barth Scale means, presented in Table 6 shows that open teachers obtained higher scores than traditional teachers on each of the seven measures. Differences, however, were significant only for Scales 6 and 7.

Insert Table 6 about here

Null Hypothesis Four

An examination of Table 7 indicates that the multivariate F-ratio was significant at the .10 level, in favor of the high rated open teachers, for two Barth measures. Scale 6 (Evaluating the Child's Work) and Scale 7 (Learning Through Exploration) were individually significant at the .015 level.

Insert Table 7 about here

Conclusion

The foregoing results demonstrating no significant personality differences between high and low rated open and traditional teachers, supports the major conclusion cited by Anderson (1969). Anderson also administered the EPPS to compare the personality attributes of

open and closed (traditional) teachers and found no overall significant differences.

While open and traditional teachers did not significantly differ in personality characteristics, a significant distinction exists concerning their assumptions about evaluation and learning. Open teachers appear to emphasize intuitive judgment when assessing a child's work. In contrast, traditional teachers are more likely to rely on objective tests to determine what the child has learned. Whereas open teachers tend to believe that learning occurs through exploration, unthreatened by adults, traditional teachers are likely to feel that a child learns best when knowledge is transmitted by the teacher to the child.

It is recommended that identification of specific personality traits should not be the sole nor most important criterion in the selection of teachers for open or traditional classrooms. Based on the results of the study teachers do not appear to possess specific personality characteristics which promote effective or highly rated open or traditional classroom teaching.

Further study of the Barth Scale should be undertaken. Presently, the scale can be easily faked and should be carefully used by educators in teacher selection and training. The possible disparity between content experts (LPA study) and teacher response data was indicated previously. If such disagreement exists, further research is urgently needed to clarify the relationship between theory and practice in open education.

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Figure 1. Arrangement of subjects (teachers) within Ratings Classroom Organization levels.

C = dependent variables

X = teachers

A_1 = high rated group

A_2 = low rated group

B_1 = open teachers

B_2 = traditional teachers

There are C_n measures (dependent) for each of X_p subjects under each of the four treatment combinations.

SUPERVISORY RATINGS

CLASSROOM ORGANIZATION

	A_1	A_2
	$C_1\ C_2\ C_3 \ldots C_n$	$C_1\ C_2\ C_3 \ldots C_n$
	$X_1\ X_1\ X_1 \ldots X_1$	$X_1\ X_1\ X_1 \ldots X_1$
	$X_2\ X_2\ X_2 \ldots X_2$	$X_2\ X_2\ X_2 \ldots X_2$
B_1	. . . .	. . . .
	. . . .	. . . .
	. . . .	. . . .
	$X_p\ X_p\ X_p \ldots X_p$	$X_p\ X_p\ X_p \ldots X_p$
	$C_1\ C_2\ C_3 \ldots C_n$	$C_1\ C_2\ C_3 \ldots C_n$
	$X_1\ X_1\ X_1 \ldots X_1$	$X_1\ X_1\ X_1 \ldots X_1$
	$X_2\ X_2\ X_2 \ldots X_2$	$X_2\ X_2\ X_2 \ldots X_2$
B_2	. . . .	. . . .
	. . . .	. . . .
	. . . .	. . . .
	$X_p\ X_p\ X_p \ldots X_p$	$X_p\ X_p\ X_p \ldots X_p$

TABLE 1

FACTOR NAMES, ORIGINAL LPA ITEM CODES, FACTOR ITEM NUMBERS, BARTH SCALE ITEM STEMS AND COMPONENT LOADINGS FOR DERIVED COMPONENT SOLUTIONS

Factor	Original LPA Code	Factor Items	Stem Summary	Loading
I				
Curricular Flexibility	K 27	11	questionable minimum body of knowledge	76
	C 7	15	right to make decisions	50
	C 8	10	choice in selection of materials	36
II				
Intellectual Development	K 28	6	knowledge resides in the knower	59
	Ev 22	7	observe over a long period of time	59
	ID 14	14	similar stages of intellectual development	53
	ID 16	8	abstractions follow experiences	50
	ID 13	1	learn at own rate and style	45
	C 9	20	engage in high interest activities	40
	Ev 19	13	measured qualities not important	35
III				
Evaluating the Child	ID 18	4	errors expected and desired	65
	K 24	26	qualities of being are more important	58
	K 26	23	knowledge is personal	41
	Ev 19	13	measured qualities not important	36
IV				
Learning Through Involvement	Ev 21	18	involvement-learning takes place--best assessed by direct observation	70
	I 10	17	collaborate in exploring	56
	I 11	12	share something important	52
	ID 14	14	similar stages of intellectual growth	44
	Ex 2	5	self-perpetuating exploratory behavior	43
		6	knowledge resides in knower	36

Note.--For each item stem contributing to naming a factor, the original Barth Scale LPA category code and item number are listed for comparison with Table 3. The LPA and factor item numbers are different because the items were reordered following the LPA study, in preparation for collection of the response data.

TABLE 1 (continued)

Factor	Original LPA Code	Factor Items	Stem Summary	Loading
V				
Learning Facilitators	C 4	27	confidence needed for learning and choices	78
		9	exploration in rich environment helps learning	50
	K 25	3	knowledge is personal integration of experience	43
VI				
Evaluating the Child's Work		22	verification of materials	71
	Ev 23	21	work is best measure of work	63
	Ev 20	16	negative effect of objective measures	57
	K 26	23	knowledge is personal	46
	Ex 1	2	exploration independent of adults	38
VII				
Learning Through Exploration	Ex 3	25	exploratory behavior if not threatened	65
	Ex 6	28	play-predominant mode of learning	57
	Ex 1	2	exploration independent of adults	50
	C 9	20	engage in high interest activities	47
	ID 16	8	abstractions follow experience	42
	C 8	10	choice in selection of materials	40
	ID 15	19	concrete follows abstract	36

TABLE 2

ANALYSIS OF VARIANCE FOR EPPS DATA

Source	df	Multivariate F	p
Open vs Traditional	9,48	.569	.816
High vs Low	9,48	.717	.690
Interaction	9,48	1.079	.395
Total	59		

TABLE 3

ANALYSIS OF VARIANCE FOR TTS DATA

Source	df	Multivariate F	p
Open vs Traditional	5,52	1.086	.379
High vs Low	5,52	.917	.478
Interaction	5,52	.786	.565
Total	59		

TABLE 4

ANALYSIS OF VARIANCE FOR BARTH SCALE DATA

Source	df	Multivariate F	p
Open vs Traditional	7,50	1.907	.088
High vs Low	7,50	1.162	.341
Interaction	7,50	1.404	.225
Total	59		

TABLE 5

ANALYSIS OF VARIANCE RESULTS FOR BARTH SCALE

Open Versus Traditional Teachers

F-Ratio for Multivariate Test of Equality of Mean Vectors = 1.9068

D.F. = 7. and 50.0000 P Less Than 0.0881

Variable	Hypoth. Mean Sq.	Univar-iate F	P Less Than	Step Down F	P Less Than
1.Curr.Flex.	28.0166	5.1814	0.0267	5.1814	0.0267
2.Intel.Devop.	9.6000	1.7255	0.1944	0.3367	0.5642
3.Eval.the Child	12.1499	3.3411	0.0729	0.5173	0.4751
4.Learn Th.Inv.	43.3500	5.5282	0.0223	0.8250	0.3679
5.Learning Fac.	6.6667	3.3574	0.0723	0.3036	0.5840
6.Eval.Ch.Wk.	93.7500	12.8414	0.0008	5.3562	0.0248
7.Learn.Th.Ex.	81.6661	8.2619	0.0058	0.5739	0.4523

TABLE 6

MEANS AND STANDARD DEVIATIONS FOR BARTH SCALE DATA

Open versus Traditional Teachers

Variables	Open Teachers Mean Scores	Traditional Teachers Mean Scores	Standard Deviations
1. Curricular Flexibility	11.60	10.23	2.33
2. Intellectual Development	31.50	30.70	2.36
3. Evaluating the Child	17.87	16.97	1.91
4. Learning Through Involvement	25.87	24.17	2.80
5. Learning Facilitators	13.67	13.00	1.41
6. Evaluating the Child's Work	20.60	18.10	2.70
7. Learning Through Exploration	31.17	28.83	3.14

High Rated Open versus High Rated Traditional Teachers

Variables	High Rated, Open Mean Scores	High Rated, Traditional Mean Scores	Standard Deviations HRO	HRT
1. Curricular Flexibility	12.33	10.47	1.92	2.42
2. Intellectual Development	31.87	30.60	2.53	2.13
3. Evaluating the Child	18.07	17.20	1.75	1.90
4. Learning Through Involvement	26.40	24.13	2.53	2.39
5. Learning Facilitators	13.93	13.33	1.44	1.18
6. Evaluating the Child's Work	22.00	18.00	2.39	2.39
7. Learning Through Exploration	32.80	29.00	1.93	2.67

TABLE 7

ANALYSIS OF VARIANCE RESULTS FOR BARTH SCALE

High Rated Open versus High Rated Traditional Teachers

F-Ratio for Multivariate Test of Equality of Mean Vectors = 4.1166

D.F. = 7. and 22.0000 P Less Than 0.0050

Variable	Hypoth. Mean Sq.	Univar-iate F	P Less Than	Step Down F	P Less Than
1.Curr. Flex.	26.1333	5.4989	0.0264	5.4989	0.0264
2.Intel. Dev.	12.0333	2.1967	0.1495	0.8732	0.3587
3.Eval. the Child	5.6333	1.6895	0.2043	0.0098	0.9218
4.Learn. Th. Inv.	38.5333	6.3703	0.0176	1.1202	0.3000
5.Learn. Fac.	2.7000	1.5662	0.2212	0.2310	0.6352
6.Eval. Ch. Wk.	119.9999	20.9979	0.0001	11.2077	0.0028
7.Learn. Th. Ex.	108.2990	19.8923	0.0002	4.1839	0.0530